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PRELIMINARY REPORT OF 1931 FOREST INSECT SURVEY
OF THE COEUR D'ALENE NATIONAL FOREST
WITH RECOMMENDATION FOR CONTROL

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INTRODUCTION

In submitting this brief report the writer desires that it be considered as being entirely preliminary in character. Due to the pressure of additional field work following the termination of the Coeur d'Alene survey, Mr. Terrell was unable to complete the preparation of his survey data into final form, and it is possible that in the near future some slight changes in the writer's recommendation for control may be necessary. However, it is believed that, if necessary, such changes will prove to be rather trivial in character and will not materially change the allotments required. This paper has been prepared for the forest insect conference which is to be held in Denver November 2nd, 1931, and a more detailed report will be submitted at a later date.

RESULTS OF THE 1931 SURVEY

A series of tabulations have been prepared presenting the results of the 1931 survey for the different units of the project. Before studying these tabulations, which do not overly impress one with the success of the 1931 control operation, the writer desires to discuss certain factors which can not be depicted in a mere presentation of figures. The measuring of the results secured from control work is extremely difficult, and can only be based upon what would have happened had no control been instituted. To do this we are obliged to turn to the white pine forests

of the Kaniksu, Blackfeet, and Glacier National Park for examples of infestation which have been allowed to develop into their maximum destructiveness. In these regions mentioned the destruction of white pine has been tremendous, while in the Coeur d'Alene the loss has been held down to a negligible figure. As a result of the devastation by insects, which developed very rapidly, the pine stands of these forests are not considered as having sufficient values remaining to justify the expense of control.

Another factor which has magnified the seriousness of the 1931 infestation is the severe windstorm which swept the Coeur d'Alene Forest in April 1931. As a result of this windstorm thousands of white pine trees were blown over, and became very favorable and attractive host material for the 1931 attacks. Windstorms do not, of course, create insects, and unless there were beetles within the region where these windfalls occurred they would not have been attacked. The disturbing factor lies in the fact that the resistance of these trees to insect attack has been eliminated, which results in the infestation being spread over a greater bark surface than if the insects were obliged to attack standing, healthy trees. These windfalls have been but lightly attacked by beetles; however, each windfall must be considered as a bug tree, as light attacks in such material always produce a heavy brood of insects. Mr. Terrell's records show that 2.8% of the trees attacked in 1931 were lodgepole, 53.4% standing white pine, and 43.7% blow-down white pine. It is estimated that the insects from at least four windfalls would be required to overcome the resistance of a standing tree. This would reduce

the total number of attacked trees to be treated in 1931 by 33 per cent, which in turn would reduce the total number of trees to be treated to 6364 instead of 9498. This would also mean that areas for which control will be necessary in 1932 would have been reduced to a point where it would not have been deemed necessary.

There is yet another factor in connection with the following data which should not be overlooked. This is the change in acreage in many of the camp areas. The "change in status" of the "New Attacks per Acre 1930-1931" should be used to compare the change in infestation rather than the "New Attacks per Area," which does not give a true comparison of the two years' infestation. The changes in the acreage of the different camp areas has been brought about through increased knowledge of timber types, etc., and the desire to include scattering infested trees along ridges and divides.

The following tabulation shows the data of the 1931 survey, with comparisons for the years 1930 and 1931:

LITTLE RIVER DISTRICT

CAMP AREA	ACRES		PORTION COVERED	NEW ATTACKS PER ACRE		CHANGE IN STATUS	NEW ATTACKS PER AREA		CHANGE IN STATUS	CONTROL IN		CONTROL IN	TREES TO BE TREATED
	1930	1931		1930	1931		1930	1931		1931	1932		
										Recommended			
Forks	1240	2040	2%	.110	.206	+87%	136	420	+208%	No	Yes		420
Tom Lavin	3150	3320	5%	.090	.090	0	284	298	+4%	Yes	Yes		298
Iron Creek	3840	4120	3%	.050	.019	-62%	192	78	-59%				
Cathcart Dam	3440	3200	4%	.063	.045	-28%	215	144	-33%				
Includes Barney Cr.:													
Cascade Cr.	4560	4640	5%	.078	.083	+6%	355	385	+8%	Yes	Yes?		385
										Recommended			
Picnic Cr.	1360	1680	4%	.120	.064	-46%	163	107	-34%	Logged			
Honeysuckle	4160	4320	7%	.046	.057	+23%	191	246	+28%				
DeLany-Lindberg	3200	3200	3%	.030	.012	-60%	96	38	-60%				
Lieburg	3820	3480	5%	.054	.200	+270%	206	696	+237%		Yes		696
Lavin Cr.	2300	2640	3%	.052	.095	+82%	120	250	+108%		Yes		120
Breakwater Dam	3880	4000	6%	.054	.156	+188%	209	624	+98%		Yes		209
	21050	25640					2099	3278	+56%				2128

.159

NOTES ON LITTLE RIVER DISTRICT

- Forks** - Control was recommended for this area in 1931. The reason it was not instituted is not known. The acreage of this area has been increased.
- Tom Lavin** - The main Tom Lavin Creek is in splendid condition, and the 1931 infestation lies in the Hamburg Creek portion of the drainage, which was not worked last spring, though it was assumed that it would be included in the Tom Lavin area. Work in 1932 to be confined to Hamburg Creek.
- Cascade Creek** - This area should be worked again unless it is to be logged.
- Lieburg, Lavin**
- & Breakwater Dam** - There are large numbers of infested windfalls within these areas.
- In Lieburg and Lavin these windfalls are confined to the hemlock girdled areas, but in the Breakwater Dam area (Copper Creek) the windfalls occur in good stands of timber.

GRIZZLY MOUNTAIN DISTRICT

CAMP AREA	ACRES		PORTION COVERED	NEW ATTACKS PER ACRE		CHANGE	NEW ATTACKS PER AREA		CHANGE	CONTROL	CONTROL	TREES TO BE TREATED
	1930	1931		1930	1931	IN STATUS	1930	1931	IN STATUS	1931	IN 1932	
Taylor's Camp	2240	2720	3%	.045	.126	+180%	100	342	+242%		Yes	342
Forks Cabin ✓	5120	5440	7%	.069	.041	-40%	353	223	-37%	Yes		
Can Cr.	1760	1760	9%	.304	.159	-48%	535	279	-48%	Yes	Yes	279
West Fork ✓	2880	3960	8%	.045	.042	-6%	130	166	+27%			
Black Canyon	--	1000	2%	--	.053	0%	--	53				
Clay Creek ✓	2440	2320	2%	.061	.054	-11%	149	122	-19%	Yes		
Lower Cougar	2560	3180	6%	.059	.121	+105%	150	385	+156%	Yes	Yes	385
Upper Cougar	4480	4040	4%	.038	.053	+39%	170	214	+25%	Yes		
Bumble Bee	1900	3040	4%	.063	.166	-163%	119	504	+323%	Yes	Yes	504
	23380	27460					1791	2435				1610

NOTES ON GRIZZLY MOUNTAIN DISTRICT

- Taylor's Camp** - This area was not treated in 1931, and a rather marked increase occurred in the 1931 attacks. This fact warrants treatment in 1932.
- Can Creek** - Though a decrease in the Can Creek infestation followed the institution of control, it is still believed to be of a character warranting control.
- Cougar Creek** - An increase in the 1931 attacks over 1930 followed this spring's treatment. Survey data show that there were a number of infested trees along the ridges and higher elevations which were not reached by the 1931 operation. These missed trees no doubt account for the reinfestation in 1931.
- Bumble Bee** - Same conditions exist on this drainage as in Cougar Creek. Windfalls in large numbers are scattered throughout this district.

SHOSHONE DISTRICT

CAMP AREA	ACRES 1930 : 1931	PORTION COVERED	NEW ATTACKS PER ACRE 1930 : 1931	CHANGE IN STATUS	NEW ATTACKS PER AREA 1930 : 1931	CHANGE IN STATUS	CONTROL IN 1931	CONTROL IN 1932	TREES TO BE TREATED
Sissons	4000 : 4700	7%	.275 : .182	-33%	1100 : 855	-22%	Yes	Yes	855
Yellow Dog R.	2280 : 2120	8%	.161 : .381	+136%	367 : 808	+120%	Yes	Yes	808
Yellow Dog Cr.	2280 : 4120	8%	.138 : .069	-50%	314 : 284	-9%	Yes	Yes	284
Downey Cr.	2560 : 4160	6%	.244 : .167	-31%	624 : 693	+11%	Yes	Yes	693
Flat Cr.	3200 : 2840	2%	.126 : .080	-36%	403 : 227	-43%	Yes		
Brett Miner	1980 : 3000	7%	.026 : .072	+176%	51 : 216	+323%	Yes	Yes	216
Rock City	2260 : 1400	5%	.104 : .016	-85%	235 : 22	-90%	Yes		
Cinnamon Cr.	1360 : 1360	Burned and being logged					Yes		
Eagle Cr.-West Fk.	1640 : 1640	--	.091 : .121	+32%	150 : 198	+32%	No		
Eagle Cr.-East Fk.	3520 : 3520	4%	.057 : .200	+251%	200 : 704	+252%	No	Yes	704
Big Creek Hawk site	4040 : 8000	3%	.098 : .139	+41%	396 : 1112	+94%	Yes	Yes	1112
Big Creek Cabin Cr.	6500 : 7000	4%	.088 : .067	-24%	572 : 469	-18%	Yes	Yes?	462?

43760?

5588?

5134

NOTES ON SHOSHONE DISTRICT

The reinfestation in this district would seem to be explainable only through trees missed during the control operation. Checks on some areas show that spotting was not very efficient. On Yellow Dog Creek Unit, trees were marked but not treated. These were apparently left by the fall operation of 1930, and not picked up in the spring of 1931. An estimate of the infestation on the west fork of Eagle Creek is the only data available. An examination will be made of this area this fall if at all possible. There are also many windfalls in this district.

FORKS DISTRICT

CAMP AREA	1930	1931	PORTION COVERED	NEW ATTACKS PER ACRE 1930	NEW ATTACKS PER ACRE 1931	CHANGE IN STATUS	NEW ATTACKS PER AREA 1930	NEW ATTACKS PER AREA 1931	CHANGE IN STATUS	CONTROL IN 1931	CONTROL IN 1932	TREES TO BE TREATED
Big Elk(Lower)	5200	4960	2%	.038			197					
Potter Creek	3760	3860	4%	.096	.091	-6%	360	351	-2%	Yes	Yes	351
Stewart Cr.	2000	2200	3%	.181	.125	-31%	362	275	-24%	Yes	Yes	275
Flat Cr.	3680	3680	4%	.041	.044	+7%	150	162	+8%			

4720

788

NOTES ON FERKS DISTRICT

This area would seem to be in very good condition. Though on both Potter and Steward Creeks a reduction followed the 1931 control operation, it is believed that additional work is essential in 1932. There are also many windfalls in this area.

SUMMARY OF CONTROL WORK RECOMMENDED
FOR THE SPRING OF 1932

Camp Area	Acres	New Attacks per Acre		Change in Status	Control in 1930	Trees to be treated	Funds Required
LITTLE RIVER DISTRICT							
Forks	2040	.110	.206	+87%	No	420	\$2,310
Tom Lavin	3320	.090	.090	0%	Yes	298	1,639
Includes Barney Cr.							
Cascade Cr.	4640	.078	.083	+06%	Yes	385	2,117
Lieburg	3480	.054	.200	+270%	No	696	3,828
Lavin Cr.	2640	.052	.095	+82%	No	120	660
Breakwater Dam	4000	.054	.156	+188%	no	209	1,149
GRIZZLY MOUNTAIN DISTRICT							
Taylor's Camp	2720	.045	.126	+180%	No	342	1,881
Can Cr.	1760	.304	.159	-48%	Yes	279	1,534
Lower Cougar	3180	.059	.121	+105%	Yes	385	2,117
Bumble Bee	3040	.063	.166	-163%	Yes	504	2,772
SHOSHONE DISTRICT							
Sissons	4700	.275	.182	-33%	Yes	855	4,702
Yellow Dog R	2120	.161	.381	+136%	Yes	808	4,444
Yellow Dog Cr	4120	.138	.069	-50%	Yes	284	1,562
Downey	4160	.244	.167	-31%	Yes	693	3,811
Brett Miner	3000	.026	.072	+176%	Yes	216	1,188
Eagle Cr.-E.Fk.:	3520	.057	.200	+251%	No	704	3,872
Big Cr.Hawksite:	8000	.098	.139	+41%	Yes	1112	6,116
Big Cr.Cabin Cr:	7000	.088	.067	-24%	Yes	462	2,541
FORKS DISTRICT							
Potter Cr.	3860	.096	.091	-6%	Yes	351	1,930
Steward Cr.	2200	.181	.125	-31%	Yes	275	1,512
	73500					9398	\$51,685

STATUS OF INFESTED MATERIAL WITHIN
THE DIFFERENT UNITS

District	Total Number of Trees	Lodgepole Pine	Standing White Pine	Windfall White Pine
Little River	2128	7% 149	65% 1383	28% 595
Grizzly	1510	5% 75	50% 755	45% 680
Shoshone	5134	00.4% 20	53.6% 2752	46% 2362
Th. Forks	626	01.5% 10	44.6% 279	53.8% 337
	9398	2.5% 254	55.7% 5169	41.8% 3975

CONCLUSIONS

As previously stated, this report is very preliminary in character, and in reality constitutes the presentation of the data secured from the 1931 survey of the Coeur d'Alene Forest only. It is regretted that time and conditions did not permit the preparation of a full and complete report of this project. However, for the purpose of the Denver meeting, it is assumed that the information as given will prove satisfactory.

Respectfully submitted,

James C. Evenden
Entomologist